



Att. No. 124263-1020  
UTA No. 013-03 CIP

*JFW*  
Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/822,343  
First Named Inventor : Meng Tao  
Filing Date : April 12, 2004  
Title : SUPPRESSION OF CHEMICAL REACTIVITY ON SEMICONDUCTOR SURFACES  
Group Art Unit : 2813  
Examiner : Not Yet Assigned  
Confirmation No. : 3111

Certificate of Mailing Under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope, with sufficient postage, addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 this day of September, 2004. *9/12*

Mail Stop: Amendments  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*Kelli Ivey*  
Signature  
Kelli Ivey  
Typed or printed name of person signing certificate

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the provisions of 37 C.F.R. § 1.97, Applicants hereby make of record the references set forth in the attached form PTO/SB/08B. No inference should be made that the cited references are in fact material, are in fact prior art, or that no better art exists. The cited references are listed in numerical order and not in any order based on their pertinence.

It is requested that the Examiner fully consider the cited references and that they be cited on the front of any patent issuing from this application.

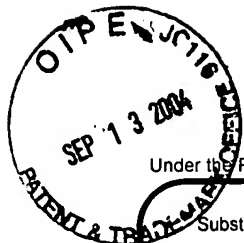
Copies of the cited references are attached.  
An early action on the merits is respectfully requested.

Respectfully submitted,

Date: *Sept. 8, 2004*

Gardere Wynne Sewell LLP  
1601 Elm Street, Suite 3000  
Dallas, Texas 75201-4761  
214-999-4052

*Monique A. Vander Molen*  
Monique A. Vander Molen  
Registration No. 53,716



Under the Paperwork Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

1

of

2

**Complete if Known**

Application Number	10/822,343
Filing Date	April 12, 2004
First Named Inventor	Meng Tao
Group Art Unit	2812
Examiner Name	Not Yet Assigned
Attorney Docket Number	124263-1020

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	R.M. TROMP, R.J. HAMERS, and J.E. DEMUTH, Si(001) dimmer structure observed with scanning tunneling microscopy, Phys. Rev. Lett., 1985, 1303, 55	
	2	E. KAXIRAS, Semiconductor-surface restoration by valence-mending absorbates: Application to Si(100):S and Si(100):Se, Physical Review B, 1991, 6324, 43	
	3	H. METZNER, TH. HALN, and J.-H. BREMER, Structure of sulfur-terminated silicon surfaces, Surf. Sci., 1997, 377-371-374, 379,	
	4	J.J. BOLAND, Structure of the H-saturated Si(100) surface, Phys. Rev. Lett., 1990, 3325, 65	
	5	M. TAO and L.P. HUNT, The thermodynamic behavior of the Si-H system and its role in Si-CVD from SiH <sub>4</sub> , J. Electrochem. Soc., 1992, 806, 139	
	6	J.E. NORTHRUP, Structure of Si(100)H: Dependence on the H chemical potential, Phys. Rev. B, 1991, 1419, 44	
	7	B.S. MEYERSON, F.J. HIMPSEL, and K. J. URAM, Bistable conditions for low-temperature silicon epitaxy, Appl. Phys. Lett., 1990, 1034, 57	
	8	J.W. LYDING, T.-C SHEN, J.S. HUBACEK, J.R. TUCKER, and G.C. ABELN, Nanoscale patterning and oxidation of H-passivated Si(100)-2x1 surfaces with an ultrahigh vacuum scanning tunneling microscope, Appl. Phys. Lett., 1994, 2010, 64	
	9	T.-C SHEN, C. WANG, G.C. ABELN, J.R. TUCKER, J.W. LYDING, PH. AVOURIS, and R.E. WALKUP, Atomic-scale desorption through electronic and vibrational excitation mechanisms, Science, 1995, 1590, 268	
	10	J.W. LYDING, UHV STM nanofabrication: progress, technology spin-offs, and challenges, Proceedings of the IEEE, 1997, 589, 85	
	11	T.-C. SHEN, C. WANG, and J.R. TUCKER, Al nucleation on monohydride and bare Si (001) surfaces: atomic scale patterning, Phys. Rev. Lett., 1997, 1271, 78	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

### Complete if Known

Application Number	10/822,343
Filing Date	April 12, 2004
First Named Inventor	Meng Tao
Group Art Unit	2812
Examiner Name	Not Yet Assigned
Attorney Docket Number	124263-1020

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
12	I. LYUBINETSKY, Z. DOHNALEK, W.J. CHOYKE, and J.T. YATES, JR., Cl <sub>2</sub> dissociation on Si(100)-(2x1): A statistical study by scanning tunneling microscopy, Phys. Rev. B, 1998, 7950, 58	
13	M. CHANDER, Y.Z. LI, D. RIOUX, and J.H. WEAVER, Patterning of Si(100): Spontaneous etching with Br <sub>2</sub> , Phys. Rev. Lett., 1993, 4154, 71	
14	The National Technology Roadmap for Semiconductors, Semiconductor Industry Association, 1997	
15	A. M. COWLEY, S. M. SZE, Surface States and Barrier Height of Metal-Semiconductor Systems, J. Appl. Phys, 1965, 3212-3220, 36	
16	J. P. LACHARME, N. BENAZZI, C. A. SEBENNE, Compositional and electronic properties of Si(001)2X1 upon diatomic sulfur interaction, Surf. Sci., 1999, 415-419, 433-435	
17	A. C. PAPAGEORGOPOULOS, M. KAMARATOS, Adsorption and desorption of Se on Si(100)2X1: surface restoration, Surf. Sci., 1999, 415-419, 433-435	
18	MICHAELSON, HERBERT B., The work function of the elements and its periodicity, J. Appl. Phys., 1977, 4729-33, 48	

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.